



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,843	01/09/2004	Andrew J. Lasley	DP-310435	1001
22851	7590	06/15/2004	EXAMINER	
DELPHI TECHNOLOGIES, INC.			NGUYEN, HOANG M	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			3748	

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,843

Applicant(s)

LASLEY ET AL.

Examiner

Hoang M Nguyen

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-26 is/are rejected.
- 7) ☒ Claim(s) 4-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4280328 (Falconer).

Falconer discloses a solar energy system comprising a steam engine 53, the exhaust of said steam turbine is used to drive a thermionic device 59 through a heat exchanger 57.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 22-26, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4280328 (Falconer) in view of U.S. 4478039 (Horgan). Falconer discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose a combustor is used. Horgan is relied upon to disclose that it's well known to use a combustor 20 to drive a steam turbine 24. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a combustor to generate heat for the steam turbine of Falconer as taught by Horgan for the purpose of more effectively providing heat because combusting generate more heat than solar

energy. Regarding claim 23, it would have been obvious to set a specific temperature range as claimed in Falconer for the purpose of achieving appropriate work output.

Claims 11-17, 19-20, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4280328 (Falconer) in view of U.S. 3846637 (Gettinger). Falconer discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose the thermionic device comprises an anode and a cathode. Gettinger is relied upon to disclose that it's well known to use a power system comprising a thermionic device having anode and cathode (lines 60-65, column 1). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a thermionic device having an anode and a cathode in the system of Falconer as taught by Gettinger for the purpose of more effectively generating energy. Regarding claims 14-17, it would have been obvious to set a specific temperature range or different power plants as claimed in Falconer for the purpose of achieving appropriate work output.

Claims 18, 21, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4280328 (Falconer). Falconer discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose the specific temperature range and many steam engines driving many thermionic devices. However, it would have been obvious to set a specific temperature range or many steam engines as claimed in Falconer for the purpose of achieving appropriate work output.

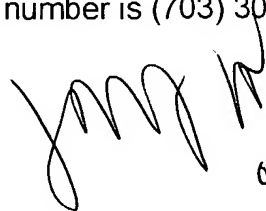
Claims 4-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Erickson, Bronicki, Pinkerton et al, and Bachmann disclose steam turbines driving thermionic devices.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (703) 308-3477. The examiner can normally be reached on Monday--Thursday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion, can be reached on (703)-308-2623. The fax phone number for the Examiner is (703) 872-9302 for regular communication, and (703) 872-9303 for after final communication.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



06/10/04

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
6/10/04